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On Use and Development of Economic Instruments for Environment Protection Control

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The work considers various aspects of creating and developing economic mechanisms to regulate environment protection, analyzes major deficiencies of existing economic leverage in this sphere, puts forward direction to improve economic management instruments taking into account changes in the legislation and actual practice.

Keywords: Environment protection, economic mechanism of environment management, pollution charge, emissions (discharges) of pollutants and waste disposal, environmental funds, funding of environment protection measures, carrying capacity of territory, damage.

Creation and moulding of economic instruments and mechanisms in the field of environment protection was closely associated with perestroika processes in political and economic spheres in the Russian Federation in 1986-1991.

Nature-protection bodies established in the format of State Nature Management Committee of Russia with the participation of other federal agencies built new economic relations in the field of environmental impact control. Considerably diverse set of economic instruments was proposed which did not exist in such a form even in foreign countries. Major novations were in the third section of the law «Concerning the Protection of the Natural

Environment» and formed the base legal framework to mould and develop new economic relations in the sphere of nature management and protection of the natural environment. [1]. Economic mechanism to regulate natural environment management proposed at that period comprised:

initiation of pollution charge, including pollutant emission (discharge) charge and waste disposal charge;

establishment of specialized environmental funds to accumulate payments of these charges;

development of management by objectives in the field of natural environment protection;

formation of contract relations between the state and users of natural resources,

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including contracts for integrated environmental management;

initiation of institution of social-economic assessment of natural resources potential of a territory, including issues of evaluating pollution damage and economic efficiency of environment-protection measures;

development of entrepreneurial activities in natural environment protection, including development of ecological insurance, audit and certification market.

In actual practice not all methodological proposal to create and develop economic mechanism of environment protection control have been realized in full. However, principal proposals concerning pollution charge and establishment of special funds to accumulate incoming payments (environmental funds) and proposals to change over to management by objectives to plan natural environment protection measures were developed during this period and successfully implemented in practice.

This paper dwells upon base economic instrument of environmental control – pollution charge.

Pollution charge was initiated in compliance with law «Concerning the Protection of the Natural Environment» (1991) to stimulate users of natural resources to reduce technogenic load on environment and collect funds to finance environment protection measures and programs.

Methodologically pollution charges were evaluated on the basis of expenditures for environment protection measures and partial indemnification of inflicted damage.

Specific economic loss (at 1990 values) was:
from emissions within MAE limits (maximum allowable emissions) – 3.3 rubles/eq.t;

from discharge within MAD limits (maximum allowable discharge) – 443.5 rubles/eq.t.

Specific expenditures for waste disposal were:

- 0.1 ruble/t of non-toxic wastes of extractive industry;
- 4.6 ruble/cubic m of non-toxic wastes of processing industry;
- 80 ruble/t of toxic wastes of IV class [4].

However, specific standard fee rates were administratively set in 1992 by the State Committee for Environmental Protection on the basis of coordination with the Ministry of Economics of Russia and Ministry of Finance of Russia and mostly took into account requirements of finance bodies concerning creation of standard fee rates. In actual practice this meant that the approved standard fee rates from the outset could not ensure in full collection of amount of finance required to indemnify the ecological damage. The latter was explained by economic situation in the country, therefore for financial and tax administrations it was important to «keep» the fiscal situation as applied to industrial enterprisers – main contaminators of environment and get beyond the scope of admissible by their estimates additional tax liabilities.

On the whole it should be noted that during the period specified by economic instability in the country, centralized disinvestments from budgets of all levels the environmental funds established by the State Nature Management Committee of Russia on the basis of pollution charges were one of major sources to fund environment protection activities. Whereas incoming payments to environmental funds in 1991 were only 23 million US dollars, in 1995 they reached 210 million US dollars, and in 1998 amounted to 250 million US dollars [5].

Initiation of pollution charges and establishment of environmental funds in all constituent entities of the Russian Federation should be considered a great achievement of the team of the State Nature Management Committee

of Russia and territorial environmental agencies. In analogy similar systems were initiated in Ukraine, Belorussia, republics of Middle Asia and Caucasus.

At the same time global principal changes in the legal environment of the country influenced further development of environmental legislation and, accordingly, forms and methods of economic regulation of negative impact on environment. The first part of the Tax Code is passed, Civil Code of the Russian Federation is issued, Privatization program is realized. New tax, property and civil relations were in conflict with the economic environmental control system.

Active development and enactment of the Tax Code resulted in transfer of the payment for natural resources and environment pollution from resource and environmental legislation to the tax legislation which affected operation of this system. However hopes laid on the Tax Code concerning creation of an efficient system of natural resource and environmental payment fell short of expectations. Payments for natural resources and negative impact on environment essentially became ordinary taxes.

The standpoint of financial bodies concerning the role and position of environmental funds largely determined by recommendations of foreign experts resulted in practical elimination of territorial environmental fund system by 2000, in two years the Federal Environmental Fund went out of business. This decision accounted for the necessity to consolidate monetary resources, enhance efficiency of their use. The format of pollution charges retained, at that, its form as in the early 90s reoriented to fiscal component. Payments now arrived not in the environmental funds, but in budgets of different levels, with the same distribution between the budgets: federal budget – 20 %, constituent entities of the Russian Federation – 40 %, municipal formations – 40 %), as it was earlier.

Enactment of new Federal Law «On Protection of Environment» (2002) did not make any principal changes in the effective system of pollution charges. The legal act determined the following types of negative impact:

- emission of pollutants into atmospheric air;
- discharge of pollutants into surface aquatic objects, underground aquatic object and onto catchment areas;
- pollution of resources, soils;
- disposal of production and consumption wastes;
- pollution of environment with noise, heat, electromagnetic ionizing and other types of physical actions;
- other types of negative impact on environment.

At the same time the law prescribed no specific standards concerning methods of calculating payments as applied to these types of negative impact, and the functioning system of pollution charges existed in its initial form.

During the same period representatives of the Russian business community raised the question about legitimacy of existing system of payments for negative environmental impact. The question was justified because the standard fee rates for negative environmental impact were established at their time by interdepartmental act at the level of the State Committee for Environmental Protection, the Ministry of Economics of Russia and Ministry of Finance of Russia which was in conflict with current standards of the Tax Code of the Russian Federation. The legal conflict was partially settled by enactment in 2003 of RF Government Ordinance of 12.06.2003 №344 «On Standard Fee Rates for Emissions into Atmospheric Air Pollutants by Stationary and Mobile Sources, Discharge of Pollutants onto Surface and Underground Aquatic Objects, Production and Consumption Waste Disposal»,

which approved standard fee rates for negative impact, including:

- payment within the established allowed normative standards of emissions, discharges, waste disposal volume, levels of other impacts;
- payment for pollution within the established limits.

Standard fee rates, like those effective prior to the ordinance widely scattered with pollutant quality. E.g., the price of benzene emissions is 2 rubles/t – 25 rubles/t, while benz(a)pyrene emissions 2 million rubles/t – 10 million rubles, emission of automobile fuel combustion – from 0.4 rubles (gas for 1000 cubic m) to 2.5 rubles/t – diesel fuel, discharge of pollutants into aquatic objects: oil 5.5 thousand rubles/t – 28 thousand rubles/t, phenol 275 thousand rubles/t – 1.4 million rubles/t, waste disposal: from 0.4 (4 class of hazard) to 1.8 thousand rubles/t (1 class of hazard) [7].

However, this ordinance did not touch upon the methodology of payment elaboration, did not comprise other types of negative impact and payments continued functioning in the early format.

To finally settle the issues of collecting payments for negative environmental impact in 2004 – 2008 Rostekhnadzor (Russian Federal Service for Ecological, Technical and Atomic Supervision) makes an attempt to prepare an appropriate law of the federal level. Enactment of a fully valid law was presumed to settle questions the users of natural resources had in connection with pollution charges, to establish legal framework to collect the charges, provide for incentives to implement new technologies (today the enterprises badly need replacement of fixed assets, therefore such a measure could be an instrument to modernize production and change over to more perfect technologies making possible not only to improve the quality of products, but

also to reduce negative environmental impact). A version of concept bill «On Payment for Negative Environmental Impact», was considered by the Government of the Russian Federation in March 2005, the bill, however did not get a proper boost [8].

It should be noted that initiation of payments for negative environmental impact encouraged not only to reduce anthropogenic load of production enterprises but also to develop economic-organizational and market methods in environment management, including: licensing of environment protection activities, certification of compliance with environment-protection requirements, ecological certification and ecological audit, ecological insurance. Development of new lines of economic mechanisms of environmental control showed that the practice of environment protection management changes over from persisting administrative methods of work with enterprises-users of natural resources to modern market relations.

In recent years the volume of payments for negative impact increased to considerable amount. E.g., returns for negative environmental impact to the budget system of the country (federal, regional and municipal levels) amounted in 2009 to 18.6 billion rubles (about US\$600 million). However, the collected payments «dissolve» in the budget system and have not proper effect on amount of financing of environment-protection measures.

Difficult path of development the methodology of pollution charge follows has not been completed. Today the system of payments functioning in Russia for actually 20 years without principal changes needs new avenues of approach and solutions.

The world community through their financial and other bodies traces the process of formation and development of ecological policy in the Russian Federation, including economic instruments in the nature management control. In

«Review of Russian Environment Management System and Possible Ways of its Modernization» (March 2009) experts of the World Bank compared Russian ecological policy with the practice of developed and large developing countries and pointed out major differences of the Russian system from international practice:

inefficient instruments of environment protection policy;

restricted and inefficient application of economic mechanisms;

lack of mechanisms and target programs to solve national priority problems in the field of environment protection.

The review noted that the international experience proved the investments into improvement of ecological policy, strengthening of environmental institutions and creation of incentives to modernize industry can stop and reverse deterioration of environment [10].

In recent years the Russian Federation passed important documents largely determining social-economic development of the country, including its ecological policy:

- RF Presidential Edict «On measures to enhance energy and environmental efficiency of Russian economy»;
- Concept of Long-Term Social-Economic Development of the Russian Federation till 2020;
- Guidelines of Actions of the Government of the Russian Federation for the period till 2012.
- Package of Environment Protection Measures concerning Environmental and Radiation Safety in the Russian Federation [11-14].

Implementation of provisions of these document shall by 2020 reduce energy intensity of GDP not less than by 40 % as compared to 2007 and reduce by 2015 amount of pollutant emissions (discharges) and waste disposal

by 2015 by not less than 20 %. To achieve these high rates requires to focus efforts on environment protection by many federal agencies, first of all, tremendous constructive work of the Ministry for the Protection of the Environment and Natural Resources of the Russian Federation.

Currently the Ministry for the Protection of the Environment and Natural Resources of the Russian Federation plans to implement a program to reform the environment protection management. E.g., materials of the Ministry for the Protection of the Environment and Natural Resources of the Russian Federation, submitted to the session of «Presidium of the State Committee for Ecology» (27 May 2010) plan to:

- revive the institution of state environment impact assessment;
- change over to rationing system based on best available technologies;
- increase payment for negative environmental impact;
- initiate measures to economically stimulate modernization of production;
- enhance efficiency of environmental control and monitoring;
- decrease administrative hurdles;
- eliminate accumulated environmental damage [14]

In the event that the enterprises do not make efforts to modernize their production to change over to best available technologies the payment for negative impact will increase for them 2-3 times by 2011 and 3-4 times – by 2016, and for the enterprises changing over to best available technologies the payments will decrease by 70 %, and after the best available technologies are implemented – decrease two times. Total annual volume of payments for the negative impact can, at this, amount to 138 billion rubles. The above data on time and amount of increase (decrease)

of ecological payments need to be thoroughly analyzed and specified.

To transform the existing system of environmental regulation into a new, based on best available technologies requires a transition period, minimum 4-5 years long. During this period it is necessary:

- to make a reference book of such standards;
- to develop recommendations to use these standards with account of compatible conditions;
- to take into account existing changes in technical regulations;
- to develop methods to determine payments for negative environmental impact with account of new environmental regulation system;
- to develop Federal Law of the Russian Federation «On payment for negative environmental impact»;
- make appropriate changes in other draft laws.

Additional time will be needed:

a) to develop environmental programs for territories and enterprises to determine time to attain emission (discharge) of pollutants into environment at the level of best available technologies;

b) to make feasibility studies and projects to renovate and build enterprises with account of new environmental requirements;

c) to implement environmental projects.

This brings up the question concerning effective system of environmental payments during the transition period which is to be substantially improved, viz.:

a) to extend the list of negative environmental impacts to be charged (pollution of earth interior, soil, environment pollution with noise, heat, electromagnetic, ionizing and other kinds of physical impacts;

b) to develop new charging methods:

for emission (discharge) of pollutants, including effect on global climate change and transboundary pollution;

emissions of associated petroleum gas and waste disposal;

c) to fix limits for emissions (discharge) of pollutants for enterprises in the form of stepwise indicates with their gradual decrease with years; to use at this, foreign experience, specifically the experience of EU countries concerning limitation of pollutant emissions into atmosphere by large incinerating plants;

d) to set payment within the emission (discharge) limit as minimum at the level of expenditures required to mitigate them, the pollution in the excess of established limits should be paid at a higher rate.

In future, after standards based on best available technologies are fully implemented in practice, changes should be made in the above said methodical approaches to determine the environmental payment. Emissions (discharge) of pollutants within the standard should be charged with environmental tax which is a specific payment for the right to use the carrying capacity of territory (CCT). CCT, at this, should be considered as a natural resource having its valuation base to determine the environmental tax. This tax should be channeled to the local budget and spent for social-economic needs of the territory. In this case not only pollution will stay in this territory, but certain monetary funds, too.

The environmental tax should be included into the product cost and, accordingly, into its price. Then, both consumer and contaminator shall pay for environment pollution. The consumer will pay for emissions (discharge) of pollutants within the standard limits, i.e. for the pollution which cannot be avoided in implementation of even the best available technologies and equipment, and the polluting enterprise – for excess of emissions

(discharge) in excess of established limits. The mechanism of payment for excess of emissions (discharge) in excess of established limits should be based on assessment of damage inflicted to environment. Charges collected in this case should be channeled to the environmental funds.

This should heavily lean on environmental audit to disclose reserves to enhance efficiency of environment-protection activities at the enterprise and enabling the environment-protection and supervising bodies focus their efforts on enterprises paying little attention to the environmental issues.

Such an approach to determine and use environmental payments will make possible to stimulate:

- environment-protection measures;
- modernization of enterprises;
- environmental programs;
- development of environmental business.

Turning to foreign experience, the EU countries shift the tax liabilities from traditional

taxes (on labor, capital, etc.) towards the activities harmful for the environment – on the basis of fiscal neutrality principle, when the total tax liabilities do not increase. Taxes and payments of environmental nature substitute (partially) destructive for the economy. This stimulates development of economy and reduces negative environmental impact.

Under current conditions it is dangerous in Russia to increase the tax burden on enterprises: it is high even without that. Therefore the proposed increase of environmental payment for enterprises almost 8 times should be accompanied with adequate decrease of other taxes.

The suggestion to reform the current system of payments for negative environmental impact makes principal changes in the existing economic mechanism of nature management and requires from developers thorough methodological elaboration of proposals and their preliminary appraisal in individual regions of the country.

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О применении и развитии экономических инструментов регулирования охраны окружающей среды

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В работе рассматриваются различные аспекты формирования и развития экономического механизма регулирования охраны окружающей среды, анализируются основные недостатки действующей системы экономического воздействия в этой сфере, предлагаются направления совершенствования экономических инструментов с учетом состоявшихся изменений в законодательстве и реальной практики.

Ключевые слова: охрана окружающей среды, экономический механизм регулирования природопользования, плата за загрязнение окружающей среды, выбросы (сбросы) загрязняющих веществ и размещение отходов, экологические фонды, финансирование природоохранных мероприятий, ассимиляционный потенциал территории, ущерб.
